[Manuscript
Various pages, short story]

circa 1955-1965

Box 206

Content # 3

① Handwritten outline by MacNeish on stratigraphy

② " list " " of occupations

③ Relationships among var. preceramic cultural phases in Mesoamerica (7 pp)

④ Pages (6) from ms. for Ch. 3, "Mesoamerica," in The Origins of Agriculture and Settled Life, MacNeish, 1992.

JGL

Stratigraphy

I - Zone A - ~~Layer~~ - (A) Description - layer

(B) Extent -

1. patches in each chamber
2. all upper west chamber
3. Cubic feet

(B) Occupancy - cultural

1. Occupation 10', level 1 San Antonio
2. Casual occupation - temporary by small group.
3. Features - Pit 14-17
4. ~~Level 1 from it~~

II - Zone B (A) ~~Description~~ gray ash with clay - patches

(B) Extent

(a) all over east chamber to considerable depth

(b) lower ash & burned in west chamber

(c) cubic feet

(B) Cultural

1. Occupation 9, level 2 (2a, 2b & 2c) San Lorenzo culture
2. Artifacts removed by level
3. Features - pits -

III - Zone C (A) Description - vegetable - 3 A

(B) Extent

(a) open array E25, E20 & S5W5

(b) cubic feet.

(C) Cultural.

1 Occupation 8, level 3 A) - Flacco culture

2. Temporary by small groups

Dec 14.

	125 × .3	= 37.5
	125 × 4 = 500 × .3	150.0
	25 × 5 = 125 × .6	75.0
	25 × 5 = 125 × .6	75.0
	25 × 4 = 125 × .5	62.5
	25 × 3 = 75 × .2	= 15.0
		265.5

Dec 13

	100 × .2	= 20
	125 × .2	= 25
	100 × .3	= 30
	100 × 6	= 60
	125 × 4	50.0
	113 × 6	= 67.8
	113 × 3	= 339
	90 × .2	= 18.0
	50 × 1	= 5.0
		309.1
		618.2

Dec 12

25 × 2	50
75	15.0
50	10.0
50	10.0
	40.0

Dec 11.

125 × .5	= 62.5
125 × .5	= 62.5
25 × .5	12.5
50 × .3	15.0
25 × .6 =	15.0
100 × .2	20
100 × 1	10
100 × 1 =	10
100 × 1 =	5
50 ×	

247.5

1 1
2475
× 2
4950

ecc 16

5 x 125 = 5

ecc 10

75 x .01 = 7.5

100 x .6 = 60.0

100 x .2 = 20.

100 x .20 = 20.

125 3 37.5

100 3 30.00

100 4 40.0

50 - 4 20.0

- subtotal 50.
285.0
x 2
5700

41
38
25
190
76
950

5. 225 x .01 = 22.5

a

8 x 25 = 200 x 2 = 40.0
x2
80.

8

9 x 25 = 225 x 4 = 900
x 2
180

7 8 x = 200 x 3 = 60
plus 25 x 3 2,5

6. 38 x 25 = 950 x 2 190.0
x 2
3800

25
x 11
25
25
275
x 2
550

4 .02 355

3 7 x 25 - 175 x .01 = 21.00

2 .01 8.0

1 25:01 = 7.5

the Swiss Lake dwellers there was a similar cultural process from the Mesolithic to a culmination in the Early Neolithic and a degeneration in settlement size and material culture in the Middle Neolithic. It is hoped that further work and comparisons may be brought to bear upon the hypothesis of cultural process that has been set up based on the Tamaulipas data. Certainly other areas seem to show similar trends but much more data is needed before this hypothesis can be truly considered to be a generalization.

Consideration of the ~~early and middle~~ stages of the Tamaulipas sequence also yield hypotheses about another kind of generalization. A problem which has long plagued archaeologists in Meso-America is the discerning of the stages leading to the local prehistoric urban civilizations. From the Valley of Mexico only the few artifacts from the Itzapan mammoths and the so-called Chalco industry or assemblage of tools gives hints as to what the very long earlier stages were. The final brief stage from the so-called Archaic or Late Formative or pre-Classic are somewhat better understood and their transition to the urban stages more clearly discerned.

The question now becomes, are some of the sequential phases of the areal sequence in northeastern Mexico ~~early~~ areal variants of these developmental basic stages farther south? There is some evidence that they may be. First of all, the Lerma Phase has artifacts that are the same as, or similar to, ones found with Itzapan mammoth in the Valley of Mexico and there is some evidence that these cultural manifestations are contemporaneous. Secondly, the artifacts of the so-called Chalco complex have resemblances to and are roughly contemporaneous with ones from the Infiernillo, Nogales, La Perra, and Ocampo Phases of Tamaulipas. And thirdly, the Laguna Phase of the Sierra de Tamaulipas, as well as the Aguilar, Chila, and El Prisco of Panuco, have many resemblances to Zacatenco, El Arbillo, and Ticoman and other phases of the Formative in the Valley of Mexico, as well as other parts of Meso-America. Finally, many of the pre-ceramic and early ceramic phases

of northeastern Mexico have been dated, and would seem to be contemporaneous with the early missing phases from the south. Thus I think that at least tentatively we may construct the early developmental stages of Meso-America on the basis of the sequence of northeastern Mexico, ~~and~~ set up this classification I have used as diagnostic ~~of t~~/the material culture~~and~~/, the subsistence based on the community pattern. In terms of terminology, I have used a binominal system. The first part of this binominal system has to do with the subsistence base and I have called it Primitive, that in reality means food-collecting, and Formative that means unspecialized food production. The second part has been the community pattern, which I have discussed at some length previously in this volume.

The earliest major stage, I have called Primitive, and the major characteristic of this stage would be food-collection, small population units, and a relatively limited number of stone tools. This major stage may be divided into two sub-stages. The earliest sub-stage, I have called Primitive Micro-bands. In Tamaulipas, Lerma and Diablo are examples of this sub-stage and in the Valley of Mexico the Itzapan mammoth killers may be another example. Projectile points were large in size and unspecialized in outline (i.e., without well-defined notches or well-defined stems). Lerma Double-pointed is an example of the type of points. Skin-scraping was certainly an important activity ~~in~~ and both unhaftable types such as large plano-convex ovoid outline scrapers, and haftable types such as snub-nosed scrapers occurred. Large thick flakes were used for scraping, chopping and cutting; bifacial oval and triangular larger blades probably served as cutting and stabbing tools. Pebbles may have been used for hammerstones and for choppers. Subsistence would have been based upon hunting with plant-collecting being of secondary importance. Settlements would have been necessarily very small and the people nomadic.

As far as Tamaulipas is concerned this sub-stage ended at least by 7000 B.C. When it began is not known.

The next sub-stage is called Primitive ~~Seasonal Macro-~~Bands. Examples of this stage in Tamaulipas are Nogales and Infiernillo.[1] Tools of this stage are very like those of the Dessert cultures further to the north. They include a series of large crude choppers, scrapers, and scraping planes; projectile points are crude and they may have notches and stems. Mortars, pestles, and some sort of ~~metates~~ millers are present. From preserved evidence, it would seem that the atlatl and dart was the chief weapon and there was a wide variety of baskets, mats, nets, and kinds of string made. Subsistence during this stage is basically dependent upon a wide variety of wild-food plants, and only secondarily on hunting. Perhaps even at this stage a few plants, such as gourds and squash were domesticated, but since they were such a minimum part of the economy, and treated in much the same manner as wild plants, one really cannot consider that there was any agriculture. It seems likely that groups wandered in well-defined areas and that the size of the bands fluctuated with the seasons. This stage probably ~~[illegible]~~ ended by about 3000 B.C.

The second major stage, called Formative, would see the beginning of food-production. The earliest substage would be Formative Bands. In Tamaulipas the La Perra, Almagre, Flacco and Guerra Phases would be an example of it. Again the nebulous Chalco complex of the Valley of Mexico might belong to this stage. Stemmed and notched points and a general diminution of point sizes would be a possible characteristic. Many of the choppers and scrapers of the previous stage, continued but there would also be present lamellar flakes, metates, and many smaller cutting tools. Preserved remains indicate better made baskets (split stitch) and textiles (twine warp and one-over-one twilled weaving technique). Groups would be of the same size as in the previous period or slightly larger but they would be definitely sedentary during at least one portion of the year. Fairly permanent habitations began but are rare. Subsistence is still basically plant-collecting but some agriculture is known. Gourds, squash, corn, beans, peppers, and perhaps cotton, began in these stages. From the little distributional evidence we have of the beginning of domesticated from southwestern Tamaulipas and the Sierra de Tamaulipas, it seems likely that each one of these plants had rather different centres of origin and spread to different areas at different times. The ending of this stage probably varied in Meso-america. In Tamaulipas it came to a close at about 1500 B.C., further south in Mexico the sub-stage may have closed at 2000 B.C.

The second substage I have called Formative Semi-permanent Villages (or Village Formative). In the Sierra de Tamaulipas this substage is absent though Mesa de Guaje, in southwest Tamaulipas, and Pavon and Ponce in the Tampico-Panuco region, are examples of it in nearby areas. Lower Tres Zapotes

in southern Vera Cruz, Mammon of the Guatemala lowlands, and Yajoa Monochrome of Honduras,are examples from farther south. One of the major indications of this stage would be pottery and houses. The houses in Meso-america would, of course, be of wattle-and-daub. Equally distinctive would be the lack of stone buildings or larger ceremonial structures. The pottery has many diagnostic features. Some of them would be the use of flaring-side and hemispherical or ~~incip~~ incurved rim flat-bottomed bowls, heavy flaring-mouthed ollas, potsherds, disks, (pierced or unpierced), Monochrome Red, white or black surface finish, incised or punctage decoration (mainly on bowl interiors, occasional loop handles on vessel (and rarely unbridged spouts. Figurines also began at this time and they are large heads, with elliptical eyes, and relaistically modelled features. The large scraper types of the previous periods diminish or disappear and fine micro-blades struck from cylindrical or barrel-shaped polyhedral cores occur. Projectile points are stemmed and notched. Complex loom weaving begins. There are also probably a host of other traits that develop in this period. It is suspected that perhaps at this time there were part-time specialists but no full time one Agriculture at this time becomes the dominant means of subsistence and new plants and hybrids occur. Villages occur and are of a semi-permanent nature since agricultural techniques are poor and force groups to move to find new fertile fields. The substage seems to have ended by 500 B.C, in Tamaulipas but farther south the end date is probably 1000 B.C. and might be as early as 1250 B.C.

The final substage is called Formative Temple-oriented Village(or Templed Formative). Laguna (Eslabones and La Salta) in the Sierra de Tamaulipas, Palmillas and La Florida in the Sierra Madre, and Aguilar, Chila,and El Prisco of the Tampico region are examples of this stage from northeast Mexico. To the south, Middle Tres Zapotes of Vera Cruz, Monte Alban I (and maybe II), Zacatenco, Cuiciulco, Copilco, Tulilco, El Arborillo,in the Valley of Mexico,

from Los Charcos to Santa Clara in highland Guatemala, Chicanel, San Jose I, Mt. Cow I and II, Biengre Viego I in lowland Guatemala, Playa de los Muertos and Uloa Bichrome of Honduras, etc. A feature diagnostic of this period is the presence of temple mounds or masonry pyramids and stone structures. Arrangements of mounds around plazas may also occur at this time. Again many of the most noticeable characteristics of this stage are in the ceramics. These include new vessel forms such as the outflaring-sided and insloping sided composite silhouette bowls with tripod feet (in the later part of the substage, hollow and mammiform), bowls with thickened lips with external horizontal projections, basal flange or basal ridge bowls, ladles or dippers, strap handles and double loop handles. Pottery decoration includes rocker stamping, zone punctation, red-on-white bichrome painting and some polychrome painting. Figurines are modelled but small-headed and with stylized eyes formed by punctates forming inverted V's. Chipped stone artifacts are rare and ground stone tools such as celts, adzes, bell-shaped pestles, and the like appear. Certainly there were some full time specialists in this period.

Settlements seem to have been towns surrounding or associated with temples or other religious structures. Occasionally there are individual hamlets around these centres. Subsistence was based on agriculture and perhaps in this period a few specialized agricultural techniques were developed.

In Tamaulipas this sub-stage continues on to relatively late and there are no further advances from it. However, further south in Meso-America this substage undergoes further development and by the time of Christ, cities, writing, and full-time specialists appear.

The question now becomes, does this reconstruction represent the steps leading to urban civilization in Meso-america? Only future investigation can answer this query. Further, if it does, is the sort of steps leading to other independent developments of civilizations elsewhere? Is the

sequence from Upper Paleolithic (Primitive Micro-bands) to or Paiquara cave material (Primitive Bands) to Shahir (Band Formative) to lower levels of Jarmo (Village Formative) to upper levels of Jarmo (Temple Formative) comparable.? Or is the sequence from coastal Peru from the lower levels of Huaca Prieta (Band Formative) to the upper levels of Huaca Prieta (Village formative) to Ancon, Supe and Capranique (Temple Formative) similar? When such data are available, then I believe this hypothesis of the development of ~~when~~ civilization outlined in the previous pages may be tested and modified. Perhaps at that time some valid generalization about the development of civilization will be possible.

area. Furthermore, all the Necessary Conditions, as described for the Oaxaca region, also certain. The question becomes, Do all the Sufficient Conditions occur to allow us to test our Primary Developmental hypothesis? As you shall see in the following description of the sequence (see also Table 22), they do.

1. <Lerma> (8000-7000 B.C.): Although no Lerma remains were excavated in the Sierra Madre, a single surface component, at the east end of the open site Tmc278 had a Lerma point in it. Lerma components also occur to the east, in the Sierra de Tamaulipas, as well as to the southwest at El Cedral in San Luis Potosi*. Thus, we do have the remains of some of the Lerma Early Nomadic Hunters, System A, in the Sierra Madre Oriental, and I hope future investigations will give a fuller picture of this manifestation.

2. <Infiernillo> (7000-5000 B.C.): Thus far, the Infiernillo phase is known only from excavated components: occupation 1 of Tmc274, Ojo de Agua Cave; occupation 1 in layer 1 of Tmc247, Romero's Cave; and occupations 1, 2, and 3 of Tmc248, Valenzuela's Cave. All were short-term microband occupations except occupation 3 of Tmc248 which had numerous hearths, suggesting it was a short-term macroband occupation. Most components seem to have been summer occupations in the caves.

Faunal remains occur in all components and plant remains in four (Tmc247 and 248), while feces occur in occupations 2 and 3 of Valenzuela's Cave. We can therefore

estimate food consumption as well as subsistence practices. Garbage remains suggest that foods from plants and animals were about equal, except for one feces that suggested that two thirds of the food was from meat and the rest from plants. The deer, skunk, and bison bones and Infiernillo Diamond and contracting stem-shaped Almagre points suggest hunting. Agave, opuntia, and a few small seeds of seteria, seeds and rinds of <Cucurbita foetidissima>, wild runner beans (<Phaseolus coccineus>), and six small seeds of wild pumpkin (<Cucurbita pepo>) give evidence of the wild plants eaten and collected in Fuegian nets and baskets as well as in loop-twine nets.

In the later levels there were also storage pits full of wild plant remains. One pumkin seed in the latest Infiernillo level is larger and may be from cultivation and/or domestication, while two gourd rinds and pepper seeds were definitely from domesticated and/or cultivated plants -- perhaps 1 percent of the diet if calculated in terms of bulk and 5 percent if calculated on the basis of calories and grams of protein.

Artifacts include scraper planes, flake buchering tools, flake choppers, netted and woven mats, firetongs, digging sticks, and wooden atlatl (dart) fragments. A few shells suggest trade with the coast.

3. <Ocampo> (4000-2000 B.C.): This phase is represented by three occupational layers from Tmc247 and the same number from Tmc248, as well as three surface sites (Imc265, 275,

and 285), and two other cave sites (Tmc247 and Tmc276). Most (seven) were short-term microband occupations, but two excavated components (occupation 4 of Tmc247 and occupation 5 of Tmc248) and the open site (Tmc285) were large enough and had enough hearths to be macroband seasonal camps. Most cave occupations were short term seasonal habitations used in the spring or summer, but the latest one of the phase, zone L (occupation 4 of Tmc 247), may have lasted from spring well into the fall.

Throughout the phase, meat seems to have decreased from perhaps 40 percent to 20 percent of the diet but hunting deer, skunk, and coatimundi with Tortugas, Nogales, and Abasolo atlatl points continued. The Ocampo people used Fuegian and full coiled nets and twilled and interlocking loop-coiled baskets to collect such plants as acorns, opuntia, agave, wild cucurbita, runner beans, seteria, and wild pumpkin (<Cucurbita pepo>) which gave them most (over 60 percent) of their subsistence. Much of it was stored in the numerous pits.

Throughout this phase, however, there was an increase in the use of plant domesticates, from perhaps 5 percent to over 25 percent. Some of these were stored. Gourds and chile peppers continued to be used, and fragments of corn (in feces) and two varieties of common beans appeared.

Callen's analysis of feces revealed two interesting trends. Throughout the phase, the size of the seteria seeds increased until they became very large. Cucurbita seeds were half big and half small at the beginning of the phase,

but were all big by the later levels. Both trends may be interpreted as indicating seed selection, as well as the planting of domesticates (squash) and cultivars (seteria).

Artifacts that indicated technological activities include gouges, antler wedges, bifacial knives, mortars, grinding stones, and shell beads. The Ocampo phase people were Foraging Bands with Incipient Agriculture -- System B, <par excellence>.

4. <Flacco phase> (2300-1800 B.C.): This was a relatively short phase represented by six floors of Tmc247, a single floor with plant preservation (occupation 6 of Tmc248), and only two surface macroband sites. One of the floors -- number 3 of Tmc247 -- had four hearths and many pits and may have been a macroband encampment. Length of occupation is difficult to determine, but it was still seasonal.

Many of the trends characteristic of Ocampo continued into this period. Examination of feces suggests that meat made up between 10 and 20 percent of the diet. The hunting of deer, skunk, coatimundi, jaguar, and the like with Flacco and Gary-stemmed points seems to have been decreasing.

Plant collecting of agave, opuntia, acorns, seteria, aloe, tripsacum grass, and so on continued at about the same level (50 percent), and the collectors used twilled and Fuegian baskets, simple coiled bags, and carrying loops. Some plants were prepared by grinding in milling stones with mullers and by pounding in mortars. Food from domesticates continued to increase (from perhaps 20 to 40 percent) with

incipient agriculture, but a very subtle change was about to take place.

#7 5. <Guerra phase> (1800-1400 B.C.): All four of our excavated components --occupations 5 through 8 -- came from Romero Cave. Only two were microbands; the rest were macrobands. All represented lengthy occupations lasting from two to four seasons. Further, two of the open sites were macroband occupations. One had some wattle-and-daub, suggesting it was a permanently occupied hamlet structure. Although the evidence is not overwhelming and more investigation is needed, there seems to have been a trend toward longer occupations by larger groups of people.

Apparently this was due to increased agricultural produce (often found in the storage pits in our excavations) which, according to Callen's feces analysis, comprised between 25 and 50 percent of the people's diet during this Guerra phase. In addition to such older domesticates as gourds (<Cucurbita pepo>), common beans, chile, sunflower, amaranth, and corn, the plants included teosinte, cotton, and squash (<Cucurbita moschata>). In terms of percentages, however, corn increasingly dominated the diet, and about half of this corn was the hybrid called Tripsacoid Chapalote. Interestingly, the large seteria seeds had disappeared. Callen believes that people no longer cultivated it because corn was more productive.

Large amounts of food (40-50 percent) still came from such wild plants as agave, opuntia, seteria, aloe, and runner beans, but these foods were on the wane. Also

diminishing was meat from deer, now hunted with Matamoros, Catan, and Palmillas corner-notched atlatl points.

Collectors used split-stitch interlocking loop and simple stitch baskets, and simple nets. Well-decorated twilled mats and cotton loom weaving, as well as other new techniques came into use. All in all, the Guerra people were on the threshold of Village Agriculture.

6. <Mesa de Guaje> (1400-1100 B.C.): Although our sample is not large, there were microband and macroband occupations from the excavation of Tmc247, a large macroband and/or hamlet site (Tmc347), and a definite hamlet with store house platforms (Tmr233, which we tested in 1955). These leave no doubt that these pottery-making people lived mainly in hamlets or villages. What is more, the preserved foodstuffs indicate that almost 50 percent of the diet came from agricultural plants. Village Agriculture -- System E -- had definitely arrived in the Sierra Madre.

This sequence from Tamaulipas confirms our model very

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Various pages, ...]